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Monterey, California

THESIS

FACTORS INFLUENCING MILITARY AFFILIATION
INTENTIONS OF FIRST TERM
ARMY ENLISTED

by

James W. Boyle, Jr.

December 1984

Thesis advisor: G. W. Thomas

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This thesis examined the military affiliation intentions of first term Army enlistees with less than one year remaining on their active duty obligations. The influence of demographic, experience, economic, and alternative employment factors on affiliation intentions was explored. Results indicated that insights into understanding military turnover can be gained by expanding traditional analysis, wherein active duty reenlistees are contrasted with non-reenlisting peers, to include reserve military service as an option

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available to soldiers facing the reenlistment decision.

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Factors Influencing Military Affiliation Intentions of First Term Army Enlisted

by

James William Boyle, Jr
Captain, United States Army
B.S., University of Pennsylvania, 1974

Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

from the

NAVAL POSTGRADUATE SCHOOL
December 1984

hesis

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This thesis examined the military affiliation intentions of first term Army enlistees with less than one year remaining on their active duty obligations. The influence of demographic, experience, economic, and alternative employment factors on affiliation intentions was explored. Results indicated that insights into understanding military turnover can be gained by expanding traditional analysis, wherein active duty reenlistees are contrasted with non-reenlisting peers, to include reserve military service as an option available to soldiers facing the reenlistment decision.

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I. INTRODUCTION

A. BACKGROUND

Since its adoption by the U.S. Armed Forces in 1973, the All Volunteer Force (AVF) has been organized accordiing to the total force policy. This policy is based on the notion that U.S. national security objectives can be achieved more efficiently through smaller peacetime active forces and a greater reliance on reserve forces to meet mobilization contingencies [Ref. 1].

Manpower requirements for the total force are determined by balancing peacetime requirements and wartime demands against the realities of political and budgetary affordability. From 1973 to 1979, as shown in Table 1, both active and reserve strengths decreased as the Department of Defense and the services tried to adapt to obtaining and retaining personnel for the services without conscription. Since 1980, active and selected reserve personnel strengths have increased. Reserve strengths increased at a faster rate than the active despite reserve strength caps established in FY 1983, as defense planners tried to maximize military capability within a politically acceptable and fiscally sound mix of reserve and active forces.

TABLE 1

END OF YEAR MILITARY PERSONNEL STRENGTH
(in thousands)

Fiscal Year (FY)	Active Duty	Selected Reserves	Reserve/ Total Force
1973	2252	919	.29
1974	2161	925	.30
1975	2127	897	.29
1976	2081	823	.28
1977	2084	813	.28
1978	2061	788	.28
1979	2024	807	.28
1980	2050	851	.29
1981	2082	899	.30
1982	2108	963	.31
1983	2123	982	.32

Sources: Ref. 1 and Ref. 3

B. THE RESERVE STRUCTURE

The U.S. military has five sources of mobilization manpower: the Individual Ready Reserve, the Selected Reserve, Inactive National Guard, the Standby Reserve and Retiree Recall Programs. Far and away, the two largest sources are the Individual Ready Reserve and the Selected Reserve.

1. The Individual Ready Reserve (IRR)

The IRR consists of individuals who have completed their active duty service commitments but have served less than six years in active or reserve units and thus have some additional obligation on their contract. The majority of IRR members do not train or get paid. They are subject to call-up and would augment existing units upon mobilization or as casualty replacements [Ref. 4]. In FY 1982, the IRR and Inactive National Guard accounted for 13% of Defense mobilization manpower resources [Ref. 2].

2. The Selected Reserve

The Selected Reserve contains all National Guard forces and those reservists who are organized in units or are paid to drill or train. The Selected Reserves are the largest group for augmentation of the active forces in the event of mobilization. They would normally mobilize and deploy by unit.

The Selected Reserves are composed of the Army National Guard, the Army Reserve, the Naval Reserve, the Marine Corps Reserve, the Air National Guard, and the Air Force Reserve. The Reserves operate under exclusive Federal control while the National Guard units remain under the control of state governors unless preempted by the President.

C. THE TOTAL ARMY

As with the other military services the Army is organized under the total force policy. The Total Army includes the Active Component, the Army Reserve and the Army National Guard organized, manned and equipped to make the most efficient and economical use of the resources available.

As of 1983, while the active Army had experienced a 3% increase in its personnel strength since its AVF low in 1979, the Selected Reserve had experienced a 25% increase in its personnel over the same period. As shown in Table 2, during FY 1983 the Selected Reserve accounted for 46% of the Army's total man-power strength.

TABLE 2

END OF YEAR PERSONNEL STRENGTH IN ARMY COMPONENTS
(in thousands)

FY	Active	Army Reserve	ANG	Total Selected Reserve	Reserve/ Tot.Force
1973	801	235	386	621	.44
1974	783	235	403	638	.45
1975	784	225	395	620	.44
1976	783	195	362	557	.42
1977	782	189	355	544	.41
1978	771	186	341	527	.41
1979	759	190	346	536	.41
1980	777	206	367	573	.42
1981	781	225	389	614	.44
1982	784	257	408	665	.46
1983	784	256	414	670	.46

Sources: Ref. 1 and Ref. 2

The role of the Reserve in the Army is even more important in the context of deployable forces: 51% of the Army's Armor and Infantry Battalions, 50% of its Artillery Battalions, and 65% of its Combat service support soldiers were found in the Reserve Components in FY 1982. [Ref. 2]

The success of the Army can thus be considered a function of how well it meets the manpower needs of its Active and Reserve Components. Both components must contend with the dynamics of recruiting and retention that affect whether they are manned with the required number of quality personnel. And the failure of one component to meet its manpower needs adversely effects the way the other component and the total Army prepare for and conduct their missions.

D. PURPOSE

Because the total Army depends on the Active and Reserve components for its viability, service in either component contributes to the national defense and the Army's role in it. A soldier currently serving on active duty can choose to continue his military service by remaining on active duty or by leaving the Active component and joining the Selected Reserve. Either option will continue his affiliation with the Army and serve the national security interests of the country.

This thesis examines the factors which influence the affiliation intentions of first term Army enlisted soldiers. Individual factors and combinations of factors which explain the decision to remain on active duty or leave active duty and enter the Reserves are investigated.

The findings of this thesis should contribute to an understanding of what aspects of military service the junior enlisted soldier values and responds to when deciding to continue or terminate his service. By understanding the factors which influence the junior soldier's affiliation decision policy makers and commanders can gain insight into how to keep a good soldier affiliated with the Army.

II. METHODOLOGY

A. DATA BASE

The data base for this study was the 1978 DOD Survey of Officers and Enlisted Personnel. The survey was developed by the Rand Corporation and sponsored by the Office of Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics). It was administered on a worldwide basis between January 1979 and June 1979 to 57,540 men and women in the four active military services. Documentation for the data collected can be found in the survey's User's Manual and Codebook. [Ref. 5]

The survey was designed to provide the Office of the Secretary of Defense and the military services with data for policy formulation and research. It was part of Rand's more comprehensive Manpower, Mobilization and Readiness Program and one of three surveys conducted by Rand to examine manpower issues such as enlistment decisions, career orientations, and attitudes of military members to policies that affect them and their households.

The survey was administered to personnel in four different variants. Forms 1 and 2 were administered to enlisted personnel and Forms 3 and 4 were administered to officers.

Forms 1 and 3 were the "economic and labor force" questionnaires. They dealt primarily with economic issues, civilian employment experience and perceptions, reenlistment decision makingand retirement. Forms 2 and 4, called the "quality of life" questionnaires, dealt primarily with specific personnel policies and their impact on military life.

Because Form 1 emphasized career decision making and military affiliation intentions it was used as the data base for this thesis. Table 3 lists the ten subject area sections of Form 1 and the major data items contained in each section. Form 1 was completed by 21,565 military personnel of which 5,062 were in the Army.

When referring to survey questions within the text of this study, a short definition of the question followed by the Rand survey question number in parentheses is provided.

TABLE 3

SUBJECT AREA SECTIONS OF FORM 1 WITH EXAMPLES OF MAJOR DATA ITEMS

Section	Data Items
Military Background........	Service, Paygrade, Respondent's permanent post, base or duty station, term of enlistment, remaining obligation.
Reenlistment/Career Intent.................	Expected years of service, expected paygrade upon leaving the military, reenlistment intention, reserve service intention

TABLE 3 (continued)

Military Work Experience...	Current primary Military Occupational Specialty (MOS), Entry primary MOS, Work Schedule
Individual Characteristics.	Sex, entry and current age, entry and current marital status, educational attainment, number and ages of dependents, racial or ethnic group
Current Housing Arrangement...........	Types of housing, home ownership/ purchase cost, rent/mortgage payments, satisfaction with current housing
Military Compensation and Benefits.............	Basic pay, BAQ, BAS, Special pays bonuses, valuation of benefits, VEAP participation
Military Retirement System...............	Preferred retirement pay schedule, expected YOS/Paygrade under alternative systems
Civilian Labor Force Experience...........	Hours/weeks worked in 1978 Civilian wages in 1978, spouse working information
Family Resources..........	Sources of income in 1978,total family income in 1978, estimated debts and resources
Civilian Job Search........	Civilian job offers in past year, probability of finding a good civilian job, expected civilian income, comparison of military and civilian job characteristics

B. SELECTION OF MEASURES OF MILITARY AFFILIATION INTENTIONS

Within the Form 1 data base, there were two questions which directly addressed the intentions of respondents to remain affiliated with the military. They asked the respondent for the likelihood of reenlistment given no bonus payments (Q20) and whether the respondent had plans to join the National Guard or Reserves upon completion of active duty (Q17). These two questions and their possible responses are reproduced in Appendix A. Based on soldiers' responses to the reenlistment and reserve intention questions four groupings of military affiliation intentions were developed.

The first grouping of respondents for studying military affiliation intentions was based on respondent expressed reenlistment likelihood (Q20). Individuals were classified as active duty stayers or leavers based on their answers to this question. Soldiers who indicated a 70% or greater probability of reenlistment were classified as "Stayers" and soldiers who indicated a 30% or lower probability of reenlistment were classified as "Leavers." Soldiers who responded with other possible answers to the question were deleted from the survey sample due to their lack of a definite stay/leave intention as indicated by the critical "stay or leave" reenlistment question.

The second grouping of respondents for studying military affiliation intention only concerned those soldiers classified as "leavers" from active duty. These soldiers were then classified based on their plans to join the National Guard or Reserves (Q17). Soldiers who indicated that they would probably or definitely join the reserves were classified as "Joiners" and those who said they probably or definitely would not join the reserves were classified as "Non-joiners." All other individuals in the sample did not receive a classification for this affiliation measure.

A third contrast grouping of military affiliation intentions was Full time (Active) service and Part time (Reserve) service. Soldiers classified as "Stayers" were now placed in the category "Full time" and Reserve "Joiners" were placed in the "Part time" category. Other soldiers did not receive a classification on this affiliation measure.

The fourth grouping of respondents for studying military affiliation intentions placed prospective "Full time" and "Part time" service members in one category called "Affiliant" and those current service members who were not intending reenlistment or joining the Reserves in the "Non-affiliant" category.

This methodology for establishing military affiliation groupings created four pairs of affiliation categories as shown in Table 4. The methodology simplified bivariate analysis of factors against each affiliation category and laid the foundation for subsequent multivariate analysis.

TABLE 4

MILITARY AFFILIATION INTENTION CATEGORIES

Category		Selection Criteria
Active Duty:	"Stayer"	70% or greater reenlistment likelihood per Q20
	"Leaver"	30% or lower reenlistment likelihood per Q20
Reserve:	"Joiner"	Active Duty Leaver who probably or definitely plan to join Reserve or National Guard per Q17
	"Non-joiner"	Active Duty Leaver who does not plan to join Reserve or National Guard per Q17
Military:	"Full time"	Active Duty Stayer
	"Part time"	Reserve Joiner
Military:	"Affiliant"	Active Duty Stayer or Reserve Joiner
	"Non-Affiliant"	Active duty leaver

C. SELECTION OF THE STUDY SAMPLE

The Form 1 data base was first stratified by branch of service. Army personnel were selected and then screened for their enlistment period, number of months on active duty, time remaining on current enlistment and age, using survey questions Enlistment Period (Q9), Months on Active Duty (Q8), Remaining Obligation (Q14) and Current Age (Q41). This screening yielded a sample of 738 first term soldiers who had served between 10 and 72 months on active duty, had less than 12 months remaining on active duty and were between the ages of 19 and 30. These 738 soldiers were then analyzed for their military affiliation intentions to see whether their responses placed them into any of the different affiliation categories and 150 soldiers were deleted from the study because they did not express a significant affiliation intention.

Based on the final screening of the sample against the affiliation categories, a sample of 588 soldiers was established. The sample distribution by military affiliation categories is presented in Table 5.

TABLE 5

NUMBER OF CASES IN THE
MILITARY AFFILIATION INTENTION CATEGORIES

Category	N
Active Duty: "Stayers"	84
"Leavers"	504
Reserve: "Joiners"	127
"Non-Joiners"	255
Military: "Full time"	84
"Part time"	127
Military: "Affiliants"	211
"Non-Affiliants"	255

D. CANDIDATE FACTORS THAT INFLUENCE MILITARY AFFILITATION INTENTIONS

1. Theoretical Basis

Most of the research concerning organizational affiliation has been done in the context of the turnover phenomenon wherein individuals or groups of individuals decide to leave an organization. Leaving the organization is the "behavior" of interest and the behavioral norm is to stay within the organization.

The dynamics for first term soldiers are different. For them the norm is not as clear. Only since FY 1980 have 50% or more of the eligible first term Army personnel chosen to reenlist, as shown in Table 6. In contrast to the majority of their civilian counterparts, soldiers make a decision to stay in the Army as the definitive expression of their career orientations.

TABLE 6

FIRST TERM ARMY REENLISTMENT RATES
(percent of eligible personnel)

Fiscal Year	Reenlistment Rate
1974	33.2
1975	38.6
1976	21.4
1977	33.1
1978	35.6
1979	43.0
1980	50.6
1981	55.0

Source: Reference 2

The distinction between routine leaving in the Army versus routine staying in other organizations highlights the need to adjust the focus from the leaving decision of turnover literature to the staying decision or the intention to remain affilited with the Army, the behavior of interest of this study.

2. A Model of Affiliation Intentions

Recent studies by Schmidt [Ref 6] and Christensen [Ref.7] contained extensive reviews of the turnover research literature. Both studies adopted a model of the turnover process developed by Arnold and Feldman [Ref. 8] to the questions contained in the 1978 Rand Survey and derived five categories of factors to explain the turnover and career orientation process. The categories they derived were used in this study to group factors influencing affiliation intentions. The categories of factors or explanatory variables were:

Demographic: Biographical data

Tenure

Cognitive/Affective Orientation: Factors designed to assess respondents' feelings about aspects of their jobs and Army life.

Income and Economics Incentives: Factors which measured individual and family financial status and its components.

Perception of Employment Alternatives: The respondents assessment of opportunities and relative compensation available through civilian employment.

3. Selection of Candidate Factors

The questions on Form 1 of the 1978 Rand Survey were analyzed for inclusion as candidate factors within the different variable categories. Each category and its factors are discussed below. A complete list of all factors and their survey questions is provided in Appendix B.

a. Demographic

Individual biographical factors included were gender (Q40), current age (Q41) and entry age (Q42), and entry and current marital status (Q45 and Q46). Dummy variables were constructed for the two marital status questions. Married personnel were placed into one category and single, divorced, separated and widowed personnel were grouped into a non-married category. Another variable was constructed to indicate whether a person who was married upon entry to the service was currently divorced, separated or widowed. The variable was developed to capture a measure of marital trauma to ascertain its impact, if any, on military affiliation.

Dependency questions (Q54, Q55, Q56) were included and dichotomous categories constructed to reflect either no dependents or some dependents (Q54) and whether the dependents were under 14 years of age (Q55) or 14 years of age or older (Q56).

Education level was then represented as a variable in several forms. Current education level (Q52) was included and then compared to entry education level to capture an in-service gain in education and variables were constructed to reflect that gain in terms of grade increase, EDDIF (Q52-Q51) and as a categorical representation, EDGAIN (1 if Q52-Q51>0). Also Q53 was used to construct categories for High School Diploma Graduates and persons with GED certificates.

Racial categories were constructed using Q44 for each racial and ethnic group reflected on the survey question, White, Black, Hispanic, Oriental, American Indian and other. This methodology would facilitate bivariate analysis with the categories of affiliation beyond that gained by a White-Other dichotomy.

b. Tenure

The study sample selection process eliminated the tenure variables, Paygrade (Q4), Length of Service (Q8), Term of Enlistment (Q9), and Remaining Time in Service (Q14), from consideration as explanatory factors. The sample was explicitly controlled for first term enlistees with less than 12 months remaining in service and between 10 and 72 months of active duty. By controlling for these factors, Paygrade was restricted and therefore not a valid predictor of turnover.

c. Cognitive/Affective Orientation

This category of explanatory factors included current location (Q6) and feelings about current location (Q7). Current location was constructed into a variable to reflect either a location in the 50 states and the District of Columbia or location overseas.

Job characteristic included a constructed variable that differentiated between soldiers in Combat Arms Occupational Specialties and non-Combat Arms peers based on respondents' answers to Current Specialty (Q32). Other candidate job characteristics included the amount of time a soldier said he spent outside his primary specialty (Q34), the total hours worked per week (Q37) and a constructed variable indicating whether the respondent spent most of his time in a supervisory position (Q33) called SUPV.

Two other factors were included in this category as possible indicators of affiliation intentions: feelings about current housing (Q59) and the degree to which military life was as the respondent expected (Q104A).

d. Income and Economic Incentives

This category encompassed the survey questions which dealt with Monthly Basic Pay (Q69), Monthly Basic

Allowance for Quarters (Q70), Monthly Basic Allowance for Subsistence (Q71), Special Pays (Q73), Spousal Earnings (Q90), Total Family Income (Q93), Total Outstanding Debts (Q94), Total Financial Assets (Q95), and a comparison of financial situation with 3 years earlier (Q96). A variable was constructed for total annual military compensation (YRCOMP) by adding monthly basic pay, allowance for quarters, allowance for subsistance,and special pays and then multiplying the sum by twelve. Another constructed variable reflected total annual military compensation as a percentage of expected annual civilian earnings. This variable called RELCOMP was obtained by dividing annual military compensation by expected civilian earnings (Q99). Another constructed variable was a dummy variable categorizing comparisons of financial position with 3 years earlier (Q96) into a group that answered "a lot" or "somewhat" better called FINBTR. Additionally, respondents who received monetary educational contributions from the service during 1978 were placed into a category called EDCONTR to see if receiving this benefit influenced affiliation intentions.

e. Perception of Employment Alternatives

This category of factors contains variables that assess the existence of alternatives and variables that compare civilian and military jobs against several criteria.

Variables that assess the existence of alternatives include civilian job offers within the past twelve months (Q97), the likelihood of finding a good civilian job (Q98), expected annual civilian earnings (Q99), and likelihood of using military skills in a civilian job (Q100). Variables that capture civilian versus military job comparisons include thirteen that ask for explicit comparisons on criteria encompassing immediate supervisors (Q102A), having a say (Q102B), retirement benefits (Q102C), medical benefits (Q102D), interesting work (Q102E), wages and salaries (Q102F), promotion chances (Q102G), training opportunities (Q102H), co-workers (Q102I), work schedule-hours (Q102J), job security (Q102K), equipment (Q102L), and job location (Q102M). Additionally, two variables or questions assessed whether respondents thought military pay would keep up with inflation (Q104C) and whether respondents believed their families would be better off if they took civilian jobs (Q104D).

E. DATA ANALYSIS SOFTWARE

Data for this study was formatted and analyzed using the Statistical Analysis System, SAS. SAS is an all-purpose data-analysis computer software system with capabilities to accomplish information storage and retrieval, data modification and programming, report writing, statistical analysis, and file handling. [Ref. 9 and Ref. 10]

F. PERCENTILE CODING OF VARIABLES WITH LIKERT SCALES

Variables with answers marked on a Likert Scales may assume more meaningful measurement if recoded based on the cummulative percentages answering each response from one end of the scale to the other. In this way, each response along the Likert Scale would indicate a percentile ranking of a response relative to all persons who answered the question. Percentile rankings may weight responses more appropriately than the cardinal Likert Scale. This issue is not addressed in this thesis.

III. BIVARIATE ANALYSIS

A. INTRODUCTION

Initial analysis of the candidate factors for their relationships, if any, with military affiliation intentions was performed using chi-square and t-tests of turnover factors. These tests determined whether membership within each pair of affiliation intentions, (Active Duty Stayers/Leavers, Reserve Joiners/Non-joiners, Military Full time/Part time and Military Affiliants/Non-affiliants), was statistically related to soldiers' responses on each candidate factor when considered apart from all other factors.

B. CHI-SQUARE TEST

The Chi-square procedure tested the hypothesis that affiliation intentions were independent of each candidate factor with discrete categorical values. Table 7 contains the complete listing of significance probabilities for each candidate variable against each pair of affiliation intentions. A significant chi-square test does not indicate a systematic relationship between a variable and affiliation intention. Multivariate analysis, such as discriminant analysis tests for a systematic relationship.

C. T-TEST

The t-test procedure analyzed the mean values and variances of continuous nominal variables within each pair of affiliation intentions. The t-test indicated whether a variable mean was significantly different within each affiliation intention group thus indicating a relationship between the variable and the affiliation intention in question. Table 8 contains the listing of significance levels for all continuous variables in the candidate set and the affiliation intentions.

One variable, whether a soldier believed he would use his military skills in a civilian job, was analyzed as both a categorical and a continuous variable. Because it had eleven possible responses, its sparse distribution of responsesmade the chi-square test invalid in some cases and the recoding (USESKILL) did not capture the variation embodied in the original question. When a chi-square test was significant that analysis took precedent in the summary of above results.

D. SIGNIFICANT VARIABLES AND THEIR RELATIONSHIPS TO AFFILIATION INTENTIONS

1. Active Duty Stayers and Leavers

Sixteen variables were found to be related to the intention to stay or leave active duty (.01 level of significance) based on bivariate models.

TABLE 7
CHI-SQUARE TEST PROB VALUES

Category	Variable Name	Surv.Ques. Recode Name	Affiliation Intentions			
			Stay/ Leave	Resrvs/ Non-Res	Full/ Part	Affil/ Non-aff
Demographic	Gender	Q40	.1257	.8067	.2298	.3049
	Entry Marital Status	Q45	.5855	.0850	NV	NV
		ENTRYMAR	.8814	.0213	.3127	.0439
	Current Marital Stat	Q46	.0994	.5003	NV	.0867
		MARRIED	.0339	.1491	.4657	.0346
	Dependency	DEPS	.0676	.0125	.7228	.0021*
	< 14	YOUNGDEP	.3877	.3662	.1382	.8014
	>=14	OLDDEPS	.0888	.0405	.7144	.0221
	Education Gain	EDGAIN	.0295	.6273	.0626	.5591
	GED certificate	GED	.8790	.6495	.9514	.6241
	High School Diploma	HSGRAD	.4071	.7647	.6522	.5335
	Racial Group	White	.3620	.0001*	.2336	.0002*
		Black	.0242	.0159	.5553	.0019*
		Hispanic	1.000	.0396	.3740	.0764
Cognitive/ Affective Orientation	Spouse in Service	SPSSVC	.0142	.0599	.0019*	.8755
	Location	States	.1542	.2051	.5328	.0648
	Feelings about Location	Q7	.0001*	.0129	.0461	.0001*
	Combat arms or not	COMBAT	.3025	.7347	.3083	.8330
	Supervisor/worker	SUPV	.7468	.3637	.9750	.2845
	Time outside MOS	Q34	.3321	.0099*	.4894	.0048*
	Feelings on housing	Q59	.2540	.0105	.3607	.0085*
	Expectations met	Q104A	.0479	.0293	.7551	.0003*
Income and Economic Incentives	Financial Situation compared w/3 years	Q96	.6488	.8600	.5699	.7836
		FINBTR	.5395	.6690	.6923	.4586
	Educational Contributions	EDCONTR	.3653	.9051	.4708	.5601
Perception of Employment Alternatives	Job offers	Q97	.0282	.6817	.0532	.4937
	Likelihood of finding good civ. job	Q98	NV	NV	NV	.0241
		FINDJOB	.0203	.1644	.5159	
	Would use Military skills	Q100	NV	.1503	NV	.1747
		USESKILL	.0080*		.0786	
	Civ/mil job comparisons:					
	Supervisors	Q102A	.0001*	NV	NV	.0001*
		Bosses		.0160	.0605	
	Having a say	Q102B	NV	NV	NV	NV
		HAVESAY	.0001*	.0659	.0286	.0004*
	Retirement benefits	Q102C	.0001*	.4184	.0689	.0137
	Medical benefits	Q102D	.0004*	.3730	.1426	.0072

TABLE 7 (continued)

Challenging work	Q102E	.0001*	NV	.0001*	.0001*
	WORKQUAL		.0167		
Pay	Q102F		NV	NV	.0001*
	PAY	.0024*	NV	NV	
	PAY2		.2785		
Chance for Promotion	Q102G	.0001*	NV	.0007*	.0001*
	PROMO		.0292		
Opportunity for trng	Q102H	.0001*	.1017	.0021*	.0001*
	TRNG				
Co-Workers	Q102I	NV	NV	NV	NV
	PEERS	.0001*	.1369	.0428	.0007*
Work Schedule	Q102J	.0636	NV	NV	.0633
	HOURS		.6138	.5004	
	HOURS2				
Job Security	Q102K	.0031	.6160	.1604	.0316
Equipment	Q102L	NV	NV	NV	NV
	EQUIP	.0007*	NV	NV	.2891
	EQUIP2		.6187	.0054*	
Job Location	Q102M	NV	NV	NV	NV
	PLACE	.0001*	NV	NV	.0003*
	PLACE2		.1818	.0002*	
Mil.pay will match inflation	Q104C	.8022	.0328	.3909	.1008
Family better off with civ. job	Q104D	.0001*	NV	.0001*	.0001*
	FAMILY		.0001*		

NV - A valid Chi-square test could not be accomplished with this variable because of a sparse destribution in the cross classification table.

* - p <= .01, i.e. variable is significant bivariate factor with the affiliation intention.

TABLE 8

T-TEST PROB VALUES

Category	Variable Name	Surv.Ques. Recode name	Affiliation Intentions			
			Stay/ Leave	Resrvs/ Non-Res	Full/ Part	Affil/ Non-aff
Demographic	Current Age	Q41	.2299	.2384	.5951	.0947
	Entry Age	Q42	.3552	.3973	.6451	.2043
	No.of dependents	Q54	.1172	.0186	.7949	.0024*
	No. of Dep < 14	Q55	.5684	.8665	.3031	.7134
	No. of Dep >= 14	Q56	.2112	.0722	.6549	.0140
	Education level	Q52	.3269	.6339	.5796	.3702
Cognitive/ Affective Orientation	Hours worked last week	Q37	.7131	.1108	.8399	.0844
Income and Economic Incentives	Basic Pay	Q69	.1058	.0030*	.9593	.0003*
	BAQ	Q70	.0093*	.1997	.1327	.0168
	BAS	Q71	.0902	.1449	.4784	.0353
	Special Pays	Q73	.5103	.2825	.2557	.5761
	Yearly Mil. Comp	YRCOMP	.3085	.0140	.6383	.0073*
	Mil. pay as % of expected civ. pay	RELCOMP	.8997	.5926	.6314	.6457
	Educational Contributions	Q79	.4097	.2142	.0668	.6880
	Outstanding debts	Q94	.0307	.4503	.1971	.0934
	Current Assets	Q95	.3199	.7213	.5367	.4261
	Total Fam. Income	Q93	.2763	.2659	.9025	.1337
Perception Employment/ Alternatives	Expected Civ.Earn.	Q99	.8150	.4896	.8713	.4851
	Would use Military skills	Q100	.0008*	.8382	.0057*	.0592

* P <= .01

Soldiers who expressed higher levels of satisfaction with their present location intended to reenlist for active duty at a rate exceeding their less satisfied peers indicating that positive feelings about duty station and/or geographic region influenced soldiers toward reenlistment.

Soldiers who felt they would use their military skills in a civilian job if they were to leave the service immediately and find civilian employment had a higher likelihood of reenlistment than soldiers who felt they would not use their military skills in a civilian job. This variable would appear to capture two possible dynamics. First, persons who intended to reenlist believed their military skills were valuable within the civilian job market and secondly, those soldiers who reenlist derive personal satisfaction from utilizing their military skills within the military environment. Despite their perception of available jobs for which they are trained in the civilian sector, intended stayers choose to continue using their skills in the military.

Twelve of the thirteen variables that elicited comparisons between military and civilian jobs on working conditions were significant in distinguishing intended stayers from leavers. In comparing supervisors, having a say, retirement benefits, medical benefits, interesting work, wages or salaries, promotion opportunity, training opportunities, co-workers, job security, equipment, and job location those soldiers who intended to reenlist tended to perceive civilian jobs to be worse than military jobs whereas those who intended to leave active duty saw civilian jobs to be better than military ones.

Soldiers who agreed that their families would be better off if they took civilian jobs intended to leave active duty at higher rates then those who disagreed that their family would be better off.

Soldiers who intended to reenlist reported a significantly higher mean receipt of Basic Allowance for Quarters than their non-reenlisting peers. This difference was at first disturbing because of the relative homogeneity of the sample (i.e. first term, 10 to 72 months service) and the fact that BAQ is dependent, in part, on grade and time in service. Upon further examination the difference in reported BAQ between stayers and leavers could be explained by the distribution of currently married people among stayers and leavers and what might be called the "halo" effect a positive disposition toward the military gives estimates of pay variables for intended affiliants. While current married status did not meet the stringent significance level of .01, it did moderately (.03 significance level) differentiate between stayers and leavers. Because married individuals tend to live in off-post housing and thus receive BAQ at rates exceeding their non-married peers who live predominently in troop barracks, a portion of the mean BAQ difference between stayers and leavers reflected marital status. The remainder of the difference may be theoretically accounted for by the "halo" effect. As with Basic Pay, BAQ throughout the Army increases as time in service and paygrade increase. But for this sample this was not the case. Reported BAQ did not correlate significantly with paygrade and did not reflect standard pay tables. The inflation of its estimates appeared to capture the attitudes of respondents to the service in general and was not a valid estimate of pay variables.

2. Reserve Joiners and Non-Joiners

Four variables had significant chi-square or t-test values for the intention of active duty leavers to join the reserves.

Active duty leavers who were white indicated that they intended to join the reserves in significantly smaller numbers than their non-white peers.

The usual test for independence between reserve intentions and the amount of time soldiers reported working outside their military occupational specialties yielded a significant chi-square value. However, the relationship between the amount of time soldiers spent working outside their MOS and their intentions to join the reserves was not systematic. That is, while overall 33.4% of the respondents intended to join the reserves, 26.2%, 51.4%, 44.6%, 26.5% and

36.2% of the respondents stating they worked out of their MOS most of the time, half of the time, some of the time, very little, and none of the time respectively were intended reservists. Thus, no consistent pattern was evident.

Soldiers' perceptions of their family being better off if they took a civilian job also were related to the intention to join the reserves. As soldiers disagreed with the statement that their family would be better off their representation in the reserve joiner group increased except at the strongly disagreed level where the number of cases was so small that a valid proportional analysis could not be accomplished.

Basic Pay was the fourth significant variable. The mean Basic Pay response for intended joiners of the reserves was significantly higher than that of non-joiners.

3. Full time and Part time Service

Eight variables were found to be significant when distinguishing between soldiers who intended to remain on active, fulltime duty and those who intended to perform reserve, parttime service.

Having a spouse currently in the service was associated with soldiers who planned to continue fulltime service as opposed to those who intended to enter the reserves. Soldiers with spouses in the service intended to continue active duty at a higher rate than married peers whose spouses were not in the service.

Five comparisons of job conditions between civilian and military jobs were significant factors in distinguishing intended full time and part time servers. Regarding challenging work, chance for promotion, training opportunities, equipment, and location, those soldiers who saw the civilian jobs as superior intended to opt for reserve service while those who saw military jobs as better intended to stay on active duty. With all five variables the percentage of prospective part time soldiers decreased and the percentage of full time soldiers increased as civilian jobs were perceived as increasingly poor alternatives to military jobs.

As soldiers increasingly disagreed with the statement that their families would be better off if they took civilian jobs, their representation in the group that intended to serve full time versus part time increased.

The mean value of intended full time soldiers on the likelihood that they would use their military skill in a civilian job was significantly higher than that of prospective part time soldiers. This relationship indicated that although they intended to remain on active duty, full time soldiers saw their military skills as more valuable in the civilian marketplace than did their part time peers. It is but a small theoretical leap to assume that just as they saw their military skills as valuable in the civilian world so too did intented full time soldiers see their military skills and performance of their military jobs as more valuable than performing a civilian job. This assertion, however, needs further proof.

4. Military Affiliants and Non-Affiliants

Twenty variables were found to be related to the intention to remain affiliated with the military in either an active or reserve capacity.

Two measures of dependency status were significant, the number of dependents and the dichotomous variable of either having or not having dependents. The mean number of dependents for prospective affiliants was significantly greater than that of non-affiliants and soldiers having dependents intended to remain affiliated with the military at a higher rate than peers without dependents.

Feelings about current location indicated that as satisfaction increased a greater proportion of respondents intended to remain affiliated with the military.

The amount of time worked outside of the primary MOS was distributed between intended affiliants and non-affiliants in a way that was significantly different than by chance but with no systematic relationship.

Soldiers who expressed more satisfaction than dissatisfaction with their current housing were present in the group of intended affiliants at higher rates then their dissatisfied peers.

As soldiers more strongly agreed that military life was as they expected they intended to remain affiliated with the military at higher rates.

Intended affiliantshad significantly different response distributions than non-affiliants on nine of thirteen job comparison measures. In evaluating civilian and military jobs for supervisors, having a say, medical benefits, challenging work, pay, promotion opportunities, opportunity for training, co-workers, and job location soldiers who judged civilian jobs to be worse than military jobs tended toward membership in the affiliant group and soldiers who responded the civilian jobs would be better than military jobs were in the non-affiliant group at higher rates.

Perceptions of family welfare with the respondent in a civilian job distinguished intended affiliants and non-affiliants. Those who disagreed with the statement that their family would be better off planned to remain affiliated with the military at a higher rate than peers who agreed with the statement.

Basic Pay and total yearly military compensation were also significant. The means for both variables were significantly higher among intended affiliants than non-affiliants.

E. SUMMARY

Bivariate analysis indicated that relationships existed between many of the candidate variables and affiliation intentions. Multivariate analysis, including discriminant analysis, is used in the next chapter to ascertain the strength of the relationship between affiliation intentions and individual variables or groups of variables.

IV. DISCRIMINANT ANALYSIS

Discriminant analysis was used to determine the classificatory power of individual variables and sets of variables for the 4 categories of affiliation intentions.

A. EXPLANATORY VARIABLES

The variables used to classify respondents in this analysis were, by and large, those found to be significant through bivariate Chi-square and t-tests. There were some additions and deletions, however.

Additions to the significant variables found during bivariate analysis were those variables from the civilian and military job comparison questions not found to be individually significant. They were included in the discriminant analysis for all four affiliation intentions in order to capture whatever supporting influence, if any, they might add when taken with the other job comparison questions.

The variable comparing family welfare in a civilian job was deleted because of the specific dynamics embodied in the question, instead a more accurate measure of job comparisons was captured within the 13 specific comparison questions. Reporting a spouse currently in the service was also deleted because only 96 out of a possible 211 soldiers analyzed in the Full time/Part time dichotomy answered the question. Including the variable would have removed too many cases from the sample.

B. ANALYSIS TECHNIQUE

Analysis using discriminant procedures involved comparing the proportion of correct classifications from the derived discriminant function with the proportion of correct classifications that could be obtained by placing all respondents in the most likely intention. The proportion correctly classified using the discriminant function, P_d, is tested for a significant increase over the majority group classification proportion, P_m, using a test of the hypothesis that P_m is greater than or equal to P_d; H_o: $P_m >= P_d$. This test is accomplished by computing a test statistic Z such that:

$$Z \gtrsim (P_d - P_m) / \left[\frac{(P_m)(1-P_m)}{n} \right]^{1/2}$$

where n is the sample size. The test statestic, Z, is approximately normally distributed and is used to accept or reject the null hypothesis that the classificatory power of the variable or variables used in the discriminant analysis is or is not significant. This test is a rigorous test of the classificatory power of the discriminant function.

C. CLASSIFICATION POWER OF EXPLANATORY VARIABLES AS A GROUP

In this section, the variables for explaining affiliation intentions were analyzed using block discriminant analysis.

The set of variables used to discriminate within each pair of affiliation intentions included all the candidate variables. Hypothesis tests were performed to indicate whether the block discriminant function could improve the proportion correctly classified from that which would be obtained if all individuals were classified in the majority group.

1. Active Duty Stayers and Leavers

The sixteen variables used to classify intended active duty stayers from active duty leavers did a significantly better classificatory job than placing all personnel in the majority category, Leavers, at the . 05 significance level, as shown in Table 9. The proportion correctly classified using the discriminant function obtained from the sixteen variables was .90. This was significantly better than the proportion, .875, obtained by classifying all respondents as Leavers.

2. Reserve Joiners and Non-Joiners

The sixteen variables used to classify intended reserve joiners and non-joiners, as a group, classified a significantly larger proportion of respondents than classification in the majority intention, Non-joiners, as shown in Table 10. The proportion successfully classified by discriminant analysis of the sixteen variables, .736 was significantly greater than the classification proportion of placing all cases into the most likely intention, .690.

TABLE 9
CLASSIFICATION OF ACTIVE DUTY STAYERS AND LEAVERS

VARIABLES IN MODEL (16)

Comparisons of civilian and military jobs:
Supervisors, Having a Say, Retirement Benefits
Medical Benefits, Challenging and Interesting Work,
Pay, Chance for Promotion, Opportunity for Training,
Co-Workers, Work Schedule, Job Security,
Equipment, Job Location;
Feelings about Current Location,
Likelihood of Using Military Skills in a Civilian Job,
Basic Allowance for Quarters

MODEL CLASSIFICATION

Actual Intent	Predicted Intent	
	Leave	Stay
Leave (419)	406	13
Stay (60)	35	25

Total 479

TEST FOR CLASSIFICATION IMPROVEMENT

P_m = 419/479 = .875

P_d = (406+ 25)/479 = .900

Prob Value for difference in proporations .048

TABLE 10

CLASSIFICATION OF RESERVE JOINERS AND NON-JOINERS

VARIABLES IN MODEL (16)

Comparisons of civilian and military jobs:
Supervisors, Having a Say, Retirement Benefits,
Medical Benefits, Challenging and Interesting Work,
Pay, Chance for Promotion, Opportunity for Training,
Co-Workers, Work Schedule, Job Security,
Equipment, Job Location;
Racial Group: White or Non-White,
Time Spent Working Outside MOS,
Basic Pay

MODEL CLASSIFICATION

Actual Intent	Predicted Intent	
	Join	Not Join
Join (122)	33	89
Not Join (227)	18	209

Total 329

TEST FOR CLASSIFICATION IMPROVEMENT

$P_m = 227/329 = .69$

$P_d = (33 + 209)/329 = .736$

Prob Value for difference in proportions: .037

3. Full time and Part time Service

The fourteen variables used to classify personnel intending full time and part time service success fully classified a significantly higher proportion of respondents than the proportion obtained by placing all personnel in the majority intention, part time service. Theclassification proportion using the discriminant procedure, .768, was significantly better than the by chance classification proportion, .607, as shown in Table 11.

4. Military Affiliant and Non-Affiliants

Twenty-two variables were used in discriminant analysis of the intent to remain affiliated with the military. The variables produced a correct classification proportion of .749 which was significantly higher than the proportion of successful classifications obtained by placing all respondents in the majority category, Non-affiliants, .594. These results are summarized in Table 12.

D. SINGLE VARIABLE CLASSIFICATION POWER

Individual discriminant functions were derived for each of the variables entered as a set in the previous section. Their individual classificatory powers were then ascertained.

TABLE 11

CLASSIFICATION OF FULL TIME AND PART TIME SERVERS

VARIABLES IN MODEL (14)

Comparisons of civilian and military jobs:
Supervisors, Having a Say, Retirement Benefits,
Medical Benefits, Challenging and Interesting Work,
Pay, Chance for Promotion, Opportunity for Training,
Co-Workers, Work Schedule, Job Security,
Equipment, Job Location;
Feelings about Current Location,
Likelihood of Using Military Skills in a Civilian Job

MODEL CLASSIFICATION

Actual Intent	Predicted Intent	
	Full Time	Part Time
Full Time (66)	38	28
Part Time (102)	11	91
Total 168		

TEST FOR CLASSIFICATION IMPROVEMENT

$P_m = 102/168 = .607$

$P_d = (38 + 91)/168 = .768$

Prob Value for difference in proportions = .001

TABLE 12
CLASSIFICATION OF AFFILIANTS AND NON-AFFILIANTS

VARIABLES IN MODEL (22)

Comparisons of civilian and military jobs:
Supervisors, Having a Say, Retirement Benefits,
Medical Benefits, Challenging and Interesting Work,
Pay, Chance for Promotion, Opportunity for Training,
Co-Workers, Work Schedule, Job Security,
Equipment, Job Location;
Racial Group: White or Non-White,
Feelings about Current Location,
Time Spent Working Outside MOS,
Feelings about Current Housing,
Assessment of Whether Military Life is as Expected,
Basic Pay,
Yearly Military Compensation,
Number of Dependents,
Dependents: Yes or No

MODEL CLASSIFICATION

Actual Intent		Predicted Intent	
		Affiliated	Non-Affiliated
Affiliated	(154)	95	59
Non-Affiliated	(225)	36	189

Total 379

TEST FOR CLASSIFICATION IMPROVEMENT

$P_m = 225/379 = .594$

$P_d = (95 + 189)/379 = .749$

Prob Value for difference in proportions = .001

1. Active Duty Stayers and Leavers

As shown in Table 13, individual variables did not display significant classificatory power in distinguishing intended active duty stayers from their peers who intended to leave active service. All sixteen variables produced classification success proportions that were not significantly different than the success proportions that could be gained by placing all respondents in the most likely category. For eight of the sixteen variables all cases were placed in the majority intention, leavers, and for seven of the variables the resulting classification function placed a smaller, albeit statistically insignificant, proportion of cases in successful categories than would have been achieved by chance.

2. Reserve Joiners and Non-Joiners

As shown in Table 14, none of the sixteen candidate variables used in analysis of reserve intentions were individually able to produce classification results significantly better than the classification of respondents by chance. Seven of the sixteen variables placed all cases in the majority intention, Reserve Non-Joiners. Four variables yielded discriminant classification proportions that were insignificantly less than, the by chance classification. Five variables classified a higher proportion than chance but their proportions were not statistically different from chance proportions.

TABLE 13

SINGLE VARIABLE CLASSIFICATION POWER FOR STAY/LEAVE INTENTIONS

Variable	1. P_m	2. P_d	3. Significant Variables
Mil-Civ job comparisons			
Supervisors	.8589	.8571	
Having a say	.8594	.8576	
Retirement benefits	.8628	.8628	
Medical benefits	.8644	.8644	
Challenging work	.8602	.8566	
Pay	.8638	.8620	
Chance for promotion	.8602	.8584	
Opport. for training	.8638	.8692	
Co-workers	.8627	.8610	
Work schedule	.8637	.8637	
Job securinty	.8610	.8610	
Equipment	.8627	.8627	
Location	.8604	.8569	
Feelings about			
Current Location	.8586	.8586	
Would use Mil. skills	.8584	.8584	
BAQ	.8624	.8624	

Notes:

1. Majority group classification proportion
2. Discriminant function successful classification proportion
3. An asterix (*) indicates that $P_d > P_m$ at .05 significance level. No variables were significant at the .05 level for this intention.

TABLE 14

SINGLE VARIABLE CLASSIFICATION POWER FOR RESERVE JOIN/NOT-JOIN INTENTIONS

Variable	1. P_m	2. P_d	3. Significant Variables
Mil-Civ job comparisons			
Supervisors	.6841	.6923	
Having a say	.6812	.6893	
Retire. benefits	.6803	.6803	
Medical benefits	.6740	.6740	
Challenging work	.6860	.6942	
Pay	.6812	.6730	
Chance for prom.	.6812	.6785	
Opport.for promo.	.6793	.6821	
Co-workers	.6766	.6739	
Work schedule	.6739	.6739	
Job security	.6767	.6767	
Equipment	.6802	.6802	
Location	.6838	.6811	
Racial Group:			
White/non White	.6675	.6675	
Time outside MOS	.6658	.6658	
Basic pay	.6694	.7049	

Notes:

1. Majority group classification proportion
2. Discriminant function successful classification proportion
3. An asterix (*) indicates that $P > P_m$ at .05 significance level. No variables were significant at the .05 level for this intention.

3. Full time and Part time Service

Fourteen variables were used in this analysis and two, the comparison of civilian and military jobs on the chance for interesting and challenging work and the location of the job, classified a significantly higher proportion of respondents successfully than would have been done by classifying all respondents in the majority category, as shown in Table 15.

Challenging Work comparisons correctly classified forty-two of seventy-eight intended fulltime soldiers and ninety-one of one hundred fourteen part time soldiers. Job Location Comparisons correctly classified twenty-nine of seventy-nine fulltime soldiers and one hundred one of one hundred seventeen parttime soldiers.

4. Military Affiliants and Non-Affiliants

As shown in Table 16, eleven out of twenty-two candidate variables classified military affiliants and non-affiliants at significantly better proportions than was achieved by classifying all cases in the most likely category, intended non-affiliants.

Eight comparisons of civilian and military jobs were significant classifiers. The chance for interesting and challenging work correctly classified sixty-five of one hundred ninety-two intended affiliants and two hundred twen-

TABLE 15

SINGLE VARIABLE CLASSIFICATION POWER FOR FULL TIME/PART TIME INTENTIONS

Variable	1. P_m	2. P_d	3. Significant Variables
Mil-Civ job comparisons			
Supervisors	.5928	.5824	
Having a say	.5969	.6327	
Retirement benefits	.6062	.6425	
Medical benefits	.6134	.6134	
Challenging work	.5938	.6927	*
Pay	.6062	.6165	
Chance for promo.	.6000	.6513	
Opport.for training	.6082	.6546	
Co-workers	.6071	.6224	
Work schedule	.6111	.6111	
Job security	.6051	.6308	
Equipment	.6051	.6410	
Location	.5969	.6633	*
Would use military skills	.6010	.5961	

Notes:

1. Majority group classification proportion

2. Discriminant function successful classification proportion

3. An asterix (*) indicates that $P_d > P_m$ at .05 significance level

TABLE 16

SINGLE VARIABLE CLASSIFICATION POWER FOR AFFILIANT/NON-AFFILIANT INTENTIONS

	1.	2.	3.
Variable	P_m	P_d	Significant Variables
Mil-Civ job comparisons			
Supervisors	.5621	.6140	*
Having a say	.5605	.6233	*
Retirement benefit	.5633	.5679	
Medical benefits	.5591	.5841	
Challenging work	.5646	.6531	*
Pay	.5643	.6366	*
Chance for promo.	.5618	.6427	*
Opport. for train.	.5631	.6104	*
Co-workers	.5596	.6000	*
Work schedule	.5580	.5625	
Job security	.5588	.5610	
Equipment	.5628	.5628	
Location	.5635	.6392	*
Feelings about Current Location	.5546	.6201	*
Racial group/ non-white	.5472	.5944	*
Time outside MOS	.5453	.5453	
Feelings about housing	.5488	.5575	
Mil.life as expec.	.5560	.5956	*
Basic pay	.5543	.5928	
Tot.yrly mil comp	.5498	.5823	
Dependents	.5466	.5835	

Notes:

1. Majority group classification proportion

2. Discriminant function successful classification proportion

3. An asterix (*) indicates that $P_d > P_m$ at .05 significance level

ty-three of two hundred forty-nine non-affiliants. The chance for promotion correctly classified eighty-two of one hundred ninety-five affiliants and two hundred four of two hundred fifty non-affiliants. The location of the job correctly classified eighty-three of one hundred ninety-six affiliants and two hundred four of two hundred fifty three non-affiliants. Comparison of wages and salaries correctly classified ninety-six of one hundred ninety-three affiliants and one hundred eighty-six of two hundred fifty non-affiliants. Comparisons of respondents' perceptions of having a say in military and civilian jobs correctly classified ninety-four of one hundred ninety six affiliants and one hundred eighty four of two hundred fifty intended non-affiliants. Comparisons of supervisors in civilian and military jobs successfully classified seventy-seven of one hundred ninety-four intended affiliants and one hundred ninety-five of two hundred forty-nine non-affiliants. Perceptions of training opportunities in civilian and military jobs successfully classified ninety of one hundred ninety-four intended affiliants and one hundred eighty-one of two hundred fifty non-affiliants. And comparisons of co-workers in civilian and military jobs successfully classified eighty five of one hundred ninety-six intended affiliants and one hundred eighty-two of two hundred forty-nine non-affiliants.

Feelings about current location was another variable that successfully classified a significantly better proportion of affiliants and non-affiliants then would have occurred by majority group classification. Feelings about current location correctly classified eighty-five of two hundred four intended affiliants and one hundred ninety nine of two hundred fifty-four non-affiliants. Reported racial group, being white or non-white, classified ninety-six intended affiliants out of two hundred eleven total intended non-affiliants and one hundred eighty-one of two hundred fifty-five non-affiliants. The last significant individual discriminator reported whether military life was as the respondent expected. Eighty of two hundred two intended affiliants and one hundred ninety-one of two hundred fifty-three intended non-affiliants were successfully classified.

E. SUMMARY OF VARIABLE CLASSIFICATION POWER

As shown in Table 17, individual variables did not significantly differentiate between soldiers who intended to reenlist for active duty versus those who intended to leave active duty. Nor did individual variables differentiate between active duty leavers who intended to join the reserves versus those who did not plan to join the reserves.

Individual variables did successfully classify soldiers who intended to remain on active duty versus those who intended to join the reserves as well as soldiers who intended to serve in either an active or reserve role versus those who did not plan on serving in any capacity.

These results and the use of sets of variables to classify soldiers into affiliation intentions indicated that the greatest differences in perceptions of employment alternatives, feelings about current location and racial group are those evident between soldiers who intend to remain affiliated with the military in either a reserve or active capacity and those soldiers who plan to terminate all affiliation with the military at the end of their current active duty obligation. Soldiers within the other affiliation categories exhibited a higher degree of homogeneity on the candidate factors.

TABLE 17

INDIVIDUALLY SIGNIFICANT VARIABLES RANK ORDERED BY CLASSIFICATORY POWER

Active Duty Stayer or Leaver ______________ None

Reserve Joiner or Non-Joiner ______________ None

Full time or Part time Service

1. Comparison of civilian and military jobs on Challenging or Interesting Work
2. Comparison of civilian and military jobs on Job Location

Military Affiliants or Non-Affiliants

1. Comparison of civilian and military jobs on Challenging and Interesting Work
2. Comparison of civilian and military jobs on the Chance for Promotion
3. Comparison of civilian and military jobs on job Location
4. Comparison of civilian and military jobs on Wages or Salaries
5. Feelings about Current Location
6. Comparison of civilian and military jobs on Having a Say
7. Comparison of civilian and military jobs on Immediate Supervisors
8. Racial Group: White or non-White
9. Comparison of civilian and military jobs on Training Opportunities
10. Comparison of civilian and military jobs on Co-Workers
11. Whether Military Life is as Expected

V. CONCLUSION AND RECOMMENDATIONS

A. CONCLUSION

The traditional analysis of military turnover which examines active duty stayers versus leavers fails to capture an important aspect of military affiliation, reserve membership. The decision for a soldier facing the end of his obligated active service is not only whether or not to reenlist. The decision may also be viewed as whether to remain affiliated with the service or to terminate affiliation. This viewpoint is particularly useful as long as the Army operates under the Total Army concept and entrusts a significant portion of its defense responsibilities to the reserve components.

Factors which are usually associated with influencing reenlistment were found to be significant when influencing affiliation, either active or reserve.

When military jobs were seen as superior to civilian jobs, when soldiers were satisfied with their location, and when military life was as expected, soldiers chose to remain with the Army in some capacity.

Results of this thesis indicated that junior enlisted soldiers may conduct an analysis, either intuitively or explicitly, of the comparitive advantages of military and civilian jobs in planning whether or not to remain affiliated with the military. As a group, the thirteen job comparison variables of the Rand survey shown in Table 18 were significant in distinguishing between the four different affiliation dichotomies, and for two of the affiliation groupings, Full time vs Part time and Affiliant vs Non-Affiliant, individual job comparison variables were significant classifiers.

TABLE 18

MILITARY AND CIVILIAN JOB COMPARISON FACTORS

Supervisors
Having a Say
Retirement Benefits
Medical Benefits
Interesting and Challenging Work
Wages or Salaries
Chance for Promotion
Opportunities for Training
People I Work With
Work Schedule
Job Security
Equipment
Job Location

These results imply that policies which promulgate training, professionalism, and leadership development within the Army contribute not only toward producing a qualified manpower pool, technically, tactically and professionally, but also contribute toward inducing more qualified soldiers to remain affiliated with the Army. Soldiers respond positively toward challenging, meaningful work, qualified supervisors and peers, and the opportunity for personal growth and advancement through training and promotion.

Policies which protect the comparability of military pay with civilian pay and provide soldiers with choice of duty station and/or occupational specialty also appear to be positive inducements toward affiliation.

Because soldiers are influenced by their feelings about their current locations, investments in facilities at Army installations appear to contribute to maintaining total Army personnel strengths.

In general, policies thought to influence reenlistment are also policies that can influence active service members to enlist in the reserves when they complete active duty.

C. FUTURE WORK

This thesis analyzed reserve intentions for individuals expressing low probability of reenlistment. Hence, reserve intentions were analyzed as having a conditional relationship to reenlistment intentions. Additional work is needed to the interrelationship between reenlistment and reserve intentions. A number of individuals expressed both high interest in the reserves and high interest in active duty reenlistment. This interrelationship may be more dynamic than that postulated in this thesis.

APPENDIX A

MILITARY AFFILIATION INTENTION SURVEY QUESTIONS

Q20:

How likely are you to reenlist at the end of your current terms of service? Assume that no Reenlistment Bonus Payments will be given, but that all other special pays which you currently receive are still available.

		Variable value
Does not apply, I plan to retire		-7
No chance	(0 in 10)	0
Very slight possibility	(1 in 10)	1
Slight possibility	(2 in 10)	2
Some possibility	(3 in 10)	3
Fair possibility	(4 in 10)	4
Fairly good possibility	(5 in 10)	5
Good possibility	(6 in 10)	6
Probable	(7 in 10)	7
Very Probable	(8 in 10)	8
Almost sure	(9 in 10)	9
Certain	(10 in 10)	10
Don't know		-8

Q17:

When you finally leave the military, do you plan to join a National Guard or Reserve unit?

	Variable value
Definitely yes	1
Probably yes	2
Probably no	3
Definitely no	4
Don't know/not sure	5

APPENDIX B

CANDIDATE EXPLANATORY VARIABLES

1. Demographic Variable Survey Questions

a) Gender:
Q40: Are you male or female?

Male.........	1
Female.......	2

b) Age:
Q41: How old were you on your last birthday?

Age last birthday....____

Q42: When you first entered active service, how old were you?

Age at entry........____

c) Marital Status:
Q45: When you first entered active service, what was your marital status?

Married...............	1
Widowed...............	2
Divorced..............	3
Separated.............	4
Single,never married..	5

Q46: What is your marital status now?

Married...............	1
Widowed...............	2
Divorced..............	3
Separated.............	4
Single,never married..	5

d) Dependency:

Q54: How many dependents do you have? Do not include yourself or your spouse.

None	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10 or more	10

Q55: How many of your dependents are children, including stepchildren and adopted children, who are under 14 years old?

None	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10 or more	10

Q56: How many of your dependents are children, including stepchildren and adopted children, who are 14 years or older?

None	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10 or more	10

e) Education:

Q52: As of today, what is your highest education level?

Elementary Grades:	
1st	1
2nd	2
3rd	3
4th	4
5th	5
6th	6
7th	7
8th	8
High School Grades:	
9th	9
10th	10
11th	11
12th (including GED)	12
College Years of Credit:	
1	13
2	14
3	15
4	16
5	17
6	18
7	19
8 or more	20

Q53: Do you have a GED Certificate or a High School Diploma?

I have a GED Certificate	1
I have a High School Diploma	2
I don't have a GED Certificate or a High School Diploma	3

f) Racial group:

Q44: What do you consider to be your main racial or ethnic group?

Afro-American/Black/Negro	1
American Indian/Alaskan Native	2
Hispanic/Puerto Rican/Mexican/Cuban/Latin/Chicano/other Spanish	3
Oriental/Asian/Chinese/Japanese/Korean/Filipino/Pacific Islander	4
White/Caucasian	5
Other	6

2. Demographic Variable Constructs

a) Marital Status

Married at Entry:

```
If Q45 Equals 1 then ENTRYMAR = 1;
If Q45 Equals 2 or Q45 Equals 3 or
Q45 Equals 4 or Q45 Equals 5 then
ENTRYMAR = 0;
```

Currently Married:

```
If Q46 Equals 1 then MARRIED = 1;
If Q46 Equals 2 or Q46 Equals 3 or
Q46 Equals 4 or Q46 Equals 5 then
MARRIED = 0;
```

Marital Trauma

```
If Q45 Equals 1 and Q46 Equals 2 or
Q46 Equals 3 or Q46 Equals 4 then
TRAUMA = 1;
Else TRAUMA = 0;
```

b) Dependency:

```
If Q54 is greater than or equal to 1 then
DEPS  = 1;
If Q54 equals 0 then DEPS = 0;

If Q55 is greater than or equal to 1 then
YOUNGDEP = 1;
If Q55 equals 0 then YOUNGDEP = 0;

If Q56 is greater than or equal to 1 then
OLDDEPS = 1;
If Q56 equals 0 then OLDDEPS - 0;
```

c) Racial Group

White (same type dichotomy drawn for Blacks, Hespanics):

```
If Q44 equals 5 then White = 1;
If Q44 equals 1 or Q44 equals 2 or
   Q44 equals 3 or Q44 equals 4 or
   Q44 equals 6 then White - 0;
```

d) Having a spouse on Active duty:

```
If Q49B equals 1 or Q49B equals 2
   then SPSSVC = 1;
If Q49B equals 0 then SPSSVC = 0;
```

3. Tenure Variable Survey Questions

Q8 To the nearest year and month, how long have you been on active duty? (If you had a break in service, count current time and time in previous tours.)

Years ________
and
Months ________

(responses converted to number of months by survey processors)

Q9 In which enlistment period are you serving? If you received an extension to your current enlistment period, do not count this as a new enlistment period.

1st	1
2nd	2
3rd	3
4th	4
5th or more	5

Q14 How soon will you complete your current enlistment including any extensions you have now?

Less than 3 months	1
At least 3 months but less than 6 months	2
At least 6 months but less than 9 months	3
At least 9 months but less than 12 months	4
At least 1 year but less than 2 years	5
At least 2 years but less than 3 years	6
At least 3 years or more	7

Q4 What is your present pay grade?

E1	1
E2	2
E3	3
E4	4
E5	5
E6	6
E7	7
E8	8
E9	9

4. Tenure Variable Control Coding:

First Termers:
If Q9 equals 1 then keep;

Soldiers with less than 12 months remaining in service;
If Q14 is less than or equal to 4 then keep;

Soldiers with between 10 and 72 months of active duty;
If Q8 is greater than or equal to 10 and Q8 is less than or equal to 72 then keep;

5. Cognitive/Affective Orientation Variable Survey Questions

a) Location

Q6 Where is your present permanent post, base or duty station? If you are on board ship, indicate the location of your home port.

Alphabetical listing of 50 States and District of Columbia	1 to 51
Alphabetical listing of Foreign Locations	52 to 74

Q7 How do you feel about your current location? Please mark the number which shows your opinion on the line below.

Very Dissatisfied — Very Satisfied

1 2 3 4 5 6 7

b) Job characteristics

Q32 Record your current primary Military Occupational Specialty

My Current Primary MOS is:________________

Q33 Which of the following best describes the kind of work that you do now?

Most of my time is spent supervising people	1
Most of my time is spent performing my work skills.....................................	2

Q34 Last month, how much of the time did you work in jobs outside your current primary MOS?

Most of the time	1
About half of the time	2
Some of the time	3
Very little of the time	4
None of the time	5

Q37 During the last 7 days, how many hours did you spend working?

Total hours worked last week: ______

c) Housing:

Q59 How do you feel about your current housing? Mark one number on the line below.

Very Dissatisfied — Very Satisfied

1 — 2 — 3 — 4 — 5 — 6 — 7

d) Expectations

Q104A How much do you agree or disagree with the following statement about military life?

Life in the military is about what I expected it to be

Strongly Agree	1
Agree	2
Neither agree nor disagree	3
Disagree	4
Strongly Disagree	5

6. Cognitive/Affective Orientation Variable Constructs

a) Location

Duty in one of the 50 States or Duty in a Foreign Location:
If Q6 is greater than or equal to 1 and Q6 is less than or equal to 51 then STATES = 1;
If Q6 is greater than 51 then STATES = 0;

b) Job Characteristics

```
Combat Arms MOS or Non-Combat Arms MOS:
If the first two characters of Q32 Equal
11, 12, 13, 15, 16 or 19, then Combat = 1;
Else Combat = 0;

Supervisor or Worker:
If Q33 Equals 1 then Supv = 1;
If Q33 Eguals 2 then Supv = 0;
```

7. Income and Economic Incentives Survey Questions

Q69 What is the amount of your monthly Basic Pay before taxes and other deductions? If you don't know the exact amount, please give your best estimate.

$____________

Q70 What is the amount of your monthly Basic Allowance for Quarters (BAQ)? BAQ is a cash payment for housing. If you don't know the exact amount, please give your best estimate.

$____________

Q71 What is the amount of your monthly Basic Allowance for Subsistance (BAS)? BAS is a cash payment for food. If you don't know the exact amount, please give your best estimate.

$____________

Q73 How much money do you currently receive each month, before taxes and deductions, from the special monthly pays and allowances listed in Q72.

$____________

Q79 During 1978, how much money did your service contribute to pay for your educational expenses at a civilian school?

$____________

Q90 Altogether in 1978, what was the total amount, before taxes and deductions, that your spouse earned from a civilian job or his or her own business?

Civilian Earnings of
Spouse in 1978 $____________

Q94 As of today, what is your estimate of the total amount of outstanding debts that you may have? Exclude any mortgage.

No debts 1
$1 - $499 2
$500 - $1,999 3
$2,000 - $4,999 4
$5,000 - $9,999 5
$10,000- $14,999 6
$15,000 or more 7

Q95 What would you say is the total value of any savings accounts, checking accounts or cash, U.S. Savings Bonds, stocks or securities that you may have right now?

$0 1
$1 - $499 2
$500 - $1,999 3
$2,000 - $4,999 4
$5,000 - $9,999 5
$10,000 - $14,999 6
$15,000 or more 7

Q96 Compared to three years ago, is your financial situation now - -

A lot better than 3 years ago 1
Somewhat better than 3 years ago 2
About the same as 3 years ago 3
Somewhat worse than 3 years ago 4
A lot worse than 3 years ago 5

8. Income and Economic Incentives Constructs

Yearly Military Compensation:
YRCOMP =(Q69+Q70+Q71+Q73)*12

Yearly military compensation as a percentage of expected civilian earnings:
RELCOMP = YRCOMP/Q99

Having a better financial situation than 3 years earlier

```
If Q96 equals 1 or Q96 equals 2 then
     FINBTR = 1;
If Q96 equals 3 or Q96 equals 4 or
     Q96 equals 5 then FINBTR = 0;
```

Military contributed to education:

```
If Q79 is greater than 0 then EDCONTR = 1;
Else EDCONTR = 0;
```

9. Perception of Employment Alternatives Survey Questions

Q97 In the past 12 months, did you receive any job offers for a civilian job which you could take if you leave the service?

Yes	1
No	0

Q98 If you were to leave the service now and try to find a civilian job, how likely would you be to find a good civilian job?

No Chance	(0 in 10)..	0
Very Slight Possibility..	(1 in 10)..	1
Slight Possibility	(2 in 10)..	2
Some Possibility	(3 in 10)..	3
Fair Possibility	(4 in 10)..	4
Fairly Good Possibility..	(5 in 10)..	5
Good Possibility	(6 in 10)..	6
Probable	(7 in 10)..	7
Very Probable	(8 in 10)..	8
Almost Sure	(9 in 10)..	9
Certain	(10 in 10)..	10
Don't know	....	-8

Q99 If you left the service right now, how much would you expect to earn per year in wages and salary if you took a full-time civilian job? Do not include fringe benefits.

Expected Annual Civilian Earnings $__________

Q100 Suppose you were to leave the service now and try to find a civilian job. How likely would you be to find a civilian job that uses the skills in your military career field?

No Chance................(0 in 10).. 0
Very Slight Possibility..(1 in 10).. 1
Slight Possibility.......(2 in 10).. 2
Some Possibility.........(3 in 10).. 3
Fair Possibility.........(4 in 10).. 4
Fairly Good Possibility..(5 in 10).. 5
Good Possibility.........(6 in 10).. 6
Probable.................(7 in 10).. 7
Very Probable............(8 in 10).. 8
Almost Sure..............(9 in 10).. 9
Certain.................(10 in 10)..10
Don't Know..........................-8

Q102 If you were to leave the service now and take a civilian job, how do you think that job would compare with your present military job in regard to the following work conditions?

Q102A The immediate supervisors
Q102B Having a say in what happens to me
Q102C The retirement benefits
Q102D The medical benefits
Q102E The chance for interesting and challenging work
Q102F The wages or salaries
Q102G The chance for promotion
Q102H The opportunities for training
Q102I The people I work with
Q102J The work schedule and hours of work
Q102K The job security
Q102L The equipment I would use on the job
Q102M The location of the job

Civilian Job Would Be A Lot Better.......... 1
Civilian Job Would Be Slightly Better....... 2
About The Same In A Civilian or Military Job............................ 3
Civilian Job Would Be Slightly Worse........ 4
Civilian Job Would Be a Lot Worse........... 5

Q104 How much do you agree or disagree with the following statements about military life?

Q104C My military pay and benefits will not keep up with inflation.
Q104D My family would be better off if I took a civilian job.

Strongly Agree	1
Agree	2
Neither Agree nor Disagree	3
Disagree	4
Strongly Disagree	5

10. Perception of Employment Alternatives Variable Constructs

Recoding of alternative job comparisons:

```
If Q102"x" equals 1 or Q 102 "x" equals 2 then
NEWVAR = 1;
If Q102 "x" equals 3 then NEWVAR = 2;
If Q102 "x" equals 4 or Q102 "x" equals 5
then NEWVAR = 3;
```

Where x represents each question in the Q102 series of questions, A to M, and NEWVAR stands for the name of each new variable.

The above recode was done for all variables in the 13 alternative job comparison aspects to accomplish a valid chi-squared analysis. Without the recode cells in several frequency tables did not have the required number of cases for the analysis to be a valid test of relationship between the independent variables and the military affiliation intention categories.The original survey variables and the constructed variables were as follows:

Survey Question	New Variable Name
Q102A	BOSSES
Q102B	HAVESAY
Q102E	WORKQUAL
Q102F	PAY
Q102G	PROMO
Q102H	TRNG
Q102I	PEERS
Q102J	HOURS
Q102L	EQUIP
Q102M	PLACE

Four of the alternative job comparisons required an additional recoding to have sufficient cases in each frequency table cell. This was accomplished by the following coding:

```
    If Q102 "x" equals 1 or Q102 "x" equals 2
        then NEWVAR2 = 0;
    If Q102 "x" equals 3 or Q102 "x" equals 4
        or Q102 "x" equals 5 then NEWVAR2 = 1;
```

Where x represents each question in the Q102 series of Questions, A to M, and NEWVAR2 stands for the name of each new variable.

This recoding created the following variable transformations:

Survey Question	New Variable Name
Q102F	PAY2
Q102J	HOURS2
Q102L	EQUIP2
Q102M	PLACE2

Recoding Q104D:

Survey question Q104D required a recoding for a valid chi-square test against the Reserve intentions of respondents Q104D was recoded as follows:

```
   If Q104D equals 1 or Q104D equals 2
      then FAMILY = 1;
   If Q104D equals 3 then FAMILY = 2;
   If Q104D equals 4 or Q104d equals 5
      then FAMILY = 3;
```

Recoding Q100

Survey question Q100 required a recoding for a valid chi-square test against intentions of respondents. Q100 was recoded as follows:

```
If Q100 equals 0 or Q100 equals 1 or
    Q100 equals 2 then USESKILL = 1;
If Q100 equals 3 or Q100 equals 4 or
    Q100 equals 5 then USESKILL = 4;
If Q100 equals 6 or Q100 equals 7 or
    Q100 equals 8 then USESKILL = 7;
If Q100 equals 9 or Q100 equals 10
    then USESKILL = 9.5
```

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